



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of: Slater

Serial No.: 09/441,683

Group No.: 2877

Filed: Nov. 16, 1999

Examiner: Zandra Smith

For: OPTICAL PROBE WITH SAMPLING WINDOW CLEANING CONFIGURATION

APPELLANT'S BRIEF UNDER 37 CFR §1.192

Mail Stop AF
Commissioner for Patents
Alexandria, VA 22313-1450

Dear Sir:

I. Real Party in Interest

The real party and interest in this case is Kaiser Optical Systems, by way of Assignment.

II. Related Appeals and Interferences

There are no appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

The application was filed with 7 claims. In an amendment filed October 1, 2002, claim 3 was canceled, and new claims 8-13 were added. Claims 1, 2 and 4-7 have been allowed, and claim 9 is objected to. Claims 8 and 10-13 are under appeal.

**IV. Status of Amendments Filed Subsequent
Final Rejection**

No after-final amendments have been filed.

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V. Concise Summary of the Invention

This invention resides in an optical probe with a self-cleaning sampling window, a feature which is particularly useful in on-line process-control environments. The concepts are ideally suited to Raman and fluorescence detection, through the apparatus and methods are not limited in this regard (Specification, page 2, lines 5-8). In terms of hardware, the apparatus includes a probe body having a window with a surface oriented toward a sample under investigation. A sampling beam carrying wavelengths representative of the sample passes into the probe body through the window for analysis (Specification, page 2, lines 9-12). A conduit, preferably forming part of the probe body, is used to carry a fluid to the surface of the window oriented toward the sample, and a partition proximate to the window is used to direct the fluid across the window as a laminar or turbulent flow (Specification, page 2, lines 12-14). In a preferred configuration, the partition further includes an aperture through which the sampling wavelengths pass. This partition also permits a portion of the fluid to pass though the aperture to ensure that the sample under investigation does not reach the window (Specification, page 2, lines 15-18). The fluid may be a liquid or gas, depending upon the nature of the sample, and is preferably a solvent to maximize window cleaning (Specification, page 2, lines 18-19). Although the fluid may be discharged without entering into the environment being sampled, the fluid may also be discharged into the sample, depending upon the application, volume of the respective fluid/sample flows, and other such factors (Specification, page 2, line 19 to page 3, line 2).

**VI. Concise Statement of Issues Presented
For Review**

1. Are claims 8 and 10-13 unpatentable over U.S. Patent No. 5,630,795 to Kuramoto et al., in view of U.S. Patent No. 5,261,410 to Alfano et al.?

**VII. Grouping of Claims for Each Ground of
Rejection Which Appellant Contends**

Appellant believes the following groups of claims represent patentably distinct subject matter requiring separate consideration on appeal:

Group I: Claims 8 and 10-13, wherein claims 10-13 stand or fall with claim 8.

VIII. Argument

Group I - Claims 8 and 10-13, wherein claims 10-13 stand or fall with claim 8.

Claim 8 and 10-13 stands rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,630,795 to Kuramoto et al., in view of U.S. Patent No. 5,261,410 to Alfano et al.

U.S. Patent No. 5,630,795 to Kuramoto et al. resides in a cleaning tube apparatus for an endoscope having an observation optical system for observing a subject part at a forward-end portion and a detachable cleaning tube. The cleaning tube is provided with a plurality of fluid jetting openings in a peripheral direction at one end for leading cleaning fluid at least to said observation optical system, and a fluid supply unit connected to said cleaning tube, for supplying the cleaning fluid to said cleaning tube.

It is absolutely certain that the apparatus of Kuramoto is intended for visual observation. As set forth in the background of the '795 patent, “[a]n endoscope, in which an elongated inserting section can be inserted into subject parts, such as a body cavity, and the like to observe and inspect the subject parts which cannot directly be viewed, and to treat the subject parts by the use of a treatment tool as occasion demands, has widely been used in a medical field of art, an industrial field of art and the like.”

U.S. Patent No. 5,261,410 to Alfano et al. relates to a method for determining if a tissue is a malignant tumor tissue, a benign tumor tissue, or a normal or benign tissue using Raman spectroscopy. The invention is based on the “discovery” that, when irradiated with a beam of infrared, monochromatic light, malignant tumor tissue, benign tumor tissue, and normal or benign tissue produce distinguishable Raman spectra.

It is Appellant’s position that the Examiner has failed to establish *prima facie* obviousness based on the Kuramoto/Alfano combination. In rejecting claims under 35 U.S.C. §103, the Examiner must provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art, or to combine references, to arrive at Appellant’s claimed invention. There must be something in the prior art that suggested the combination, other than the hindsight gained from knowledge that the inventor choose to combine these particular things in this particular way. Uniroyal Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988). The Examiner is also required to make specific findings on a suggestion to combine prior art references. In Re Dembiczak, 175 F.3d 994, 1000-01, 50 USPQ2d 1614, 1617-19 (Fed. Cir. 1999).

In this case, the Examiner states that "it would have been obviousness to one having ordinary in the art at the time of invention to use Raman spectra because certain body constituents produce distinguishable Raman spectra when illuminated with the proper wavelength." While it is true that certain body constituents produce distinguishable Raman spectra when illuminated with the proper wavelength, this is not a sufficient justification for combining references. In point of fact, there is no teaching or suggestion *from the prior art* to combine Kuramoto and Alfano. Whereas Kuramoto is directed to a cleaning tube apparatus for an endoscope, wherein the "wavelengths" are an optical image and not wavelength-shifted spectra, Alfano et al. is directed to a method for examining tissues using Raman spectroscopy with an endoscope (63) that has no window-cleaning mechanism or, for that matter, appears to have no window to clean. Given insufficient motivation to combine, obviousness is clearly precluded.

Conclusion

In conclusion, for the arguments of record and the reasons set forth above, all pending claims of the subject application continue to be in condition for allowance and Appellant seeks the Board's concurrence at this time.

Date: May 19, 2003

Respectfully submitted,

By

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APPENDIX A

CLAIMS ON APPEAL

8. An optical probe with a self-cleaning sampling window, comprising:
 - a probe body having a window with a surface oriented toward a sample under investigation;
 - a sampling beam carrying Raman or fluorescence wavelengths representative of the sample into the probe body through the window for analysis;
 - a conduit carrying a fluid to the surface of the window oriented toward the sample; and
 - a structure operative to flood the window with the fluid.
10. The optical probe of claim 8, wherein the fluid is a solvent.
11. The optical probe of claim 8, wherein the fluid is a liquid.
12. The optical probe of claim 8, wherein the fluid is a gas.
13. The optical probe of claim 8, wherein the fluid enters into the sample under investigation after flooding the window.